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THE GENERALIZATION OF TREATMENT GAINS
OF MILDLY HANDICAPPED ADOLESCENTS FROM SPECIAL EDUCATION
TO REGULAR EDUCATION CLASSROOMS USING
PEER-MEDIATED SELF-MANAGEMENT PROCEDURES

by

Deborah J. Smith

A dissertation submitted in partial fulfillment
of the requirements for the degree
of

DOCTOR OF PHILOSOPHY

in

Special Education

UTAH STATE UNIVERSITY
Logan, Utah

1988

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Deborah J. Smith

Deborah J. Smith

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ABSTRACT

The Generalization of Treatment Gains
of Mildly Handicapped Adolescents From Special Education
to Regular Education Classrooms Using
Peer-Mediated Self-Management Procedures

by

Deborah J. Smith, Doctor of Philosophy
Utah State University, 1988

Major Professor: Dr. K. Richard Young
Department: Special Education

The purpose of the present study was to investigate whether a self-evaluation procedure paired with a token economy would be effective in reducing the off-task and talk-out behavior of behaviorally disordered and learning disabled high school students in a resource classroom. The study also examined the effects of the self-evaluation procedures when monitored by regular education peers on target students' behavior in their regular education English class. In addition to improving classroom behavior, another purpose of the study was to examine the effectiveness of the self-evaluation procedures when paired with an academic goal-setting component on academic variables in both the resource and regular education classrooms.

The results revealed that student behavior generally improved after self-evaluation procedures were taught in the resource room and that

improved behavior generalized to the regular class once peers implemented the matching component of the self-management procedures. As a group, students' average rate of off-task behavior decreased 17% in the resource room and 35% in the regular class. Averages rates of talk-outs for the group were reduced by 6% in the resource room and 24% in the regular class. Gains in academic performance were observed in both the special and regular classrooms. An increase in the number of assignments completed was observed following the implementation of the self-management procedures across all subjects in the special education class, as was an increase in the overall percentage of those assignments that were correct. Similarly, the percent complete on assignments in the regular class increased on the average 20% while the percent correct increased 24% following the implementation of the matching procedures.

(93 pages)

CHAPTER I

INTRODUCTION

Behavioral control of student responding has been well documented in the literature (McLaughlin, 1976; O'Leary & Drabman, 1971). However, discipline remains a major problem for school systems (Gordon, 1981). A group of students frequently associated with discipline problems are those students labeled behaviorally disordered or learning disabled. These students often display a variety of behavior problems in addition to their academic difficulties. These students are of concern because they do not fully benefit from the instruction offered by the school. Their behavior frequently interferes with teachers' instructional efforts, and attempts to deal with their behavior require considerable school personnel time. For these reasons, the inclusion of self-management procedures as components of classroom management systems has been examined (Young, Smith, West, & Morgan, 1987).

The rationales for teaching self-management skills to behaviorally disordered and learning disabled students are compelling. First, when a student manages his or her own behavior and academic performance, the teacher may devote more time to teaching and less time to behavior management (Rosenbaum & Drabman, 1979). Second, external behavior management programs (e.g., teacher-managed) work best when a teacher or parent is available to observe student behavior and administer consequences. The external manager cannot always be present, however, and even when they are, some problem behaviors may go unnoticed. Therefore, students may learn to behave appropriately only when teachers or parents are watching. Finally, research has suggested that self-management

strategies may facilitate the generalization of behavior from training settings to nontraining settings and facilitate the maintenance of behavior over time (Kiburz, Miller, & Morrow, 1984; Rhode, Morgan, & Young, 1983). Therefore, the development of effective, reliable, and practical self-management procedures may enhance the participation and education of behaviorally disordered and learning disabled students in mainstream settings.

It is generally recognized that the following strategies make up the components of self-management: self-recording, self-evaluation, and self-reinforcement (Glynn, Thomas, & Shee, 1973; Kanfer, 1975). More recently, self-instruction and goal setting have been included as self-management components (Fowler, 1984). Numerous studies have reported the effectiveness of one, or a combination of, several of these components in bringing about an improvement in either classroom or academic behaviors in the special education setting (Barkley, Copeland, & Sivage, 1980; Lloyd, Hallahan, Kosiewicz, & Kneedler, 1982; Osborne, Kosiewicz, Crumley, & Lee, 1987). Fewer studies, however, address the issue of generalization and maintenance of behavioral gains made in the special education setting to the mainstream setting following self-management training. Of those that have, mixed results have yet to answer the question as to what conditions promote generalized behavior change in new settings. In addition, the majority of studies that examine the effectiveness of self-management strategies to bring about behavior change are limited to the elementary school-aged population. Of the studies that

examine the effects of these strategies with adolescents, few have been conducted in a public school setting.

The use of peers in the self-management training process has been suggested as a possible strategy to facilitate the generalization and maintenance of behavioral gains (Fowler, 1984; Smith, Young, West, Morgan, & Rhode, in press). Self-management strategies that solicit attention or comments by peers may produce more durable behavior change than private or teacher prompted self-management strategies, and the peer's presence in the mainstream environment may serve to facilitate generalization and maintenance of skills acquired in the special education setting. Although peers have been shown to be effective mediators or change agents of behavior change, their effectiveness as facilitators of generalization is unclear (Kalfus, 1984). In addition, no research has been reported on the use of peer mediators in self-management training programs with secondary-aged handicapped students.

Problem Statement

Self-management training appears to be an effective means to control classroom and academic behavior. In addition, there is some evidence to suggest that it may be a viable means of promoting generalization and maintenance of behavioral gains made in the special education classroom to the mainstream setting. However, the majority of investigations have reported success with elementary-aged populations; there is little documentation concerning the effectiveness of self-management training in public school settings with secondary-aged, behaviorally disordered or learning disabled students.

Peers have been shown to serve effectively as behavior change agents and their participation in self-management training may help newly acquired behaviors generalize and maintain over time. However, no research has reported the use of peers in self-management training programs with high school students who have been classified as behavior disordered or learning disabled.

The problem, then, is that there is a lack of research documenting self-management strategies that teachers of secondary-aged, learning disabled or behavior disordered students may implement which will facilitate the generalization and maintenance of behavioral gains made in the special education class to students' regular classrooms. Research is particularly lacking in practical procedures which may be enhanced through the use of peer mediators.

Purpose and Objectives

The purpose of the present study was to investigate whether a self-evaluation procedure paired with a token economy would be effective in reducing the off-task and disruptive behaviors of behaviorally disordered and learning disabled high school students in a resource classroom. The study also examined the effects of the self-evaluation procedures, when monitored by regular education peers, on target students' behavior in their regular education English class. In addition to improving classroom behavior, another purpose of the study was to examine the effectiveness of the self-evaluation procedures, when paired with an academic goal-setting component, on academic variables in both the resource and regular education classrooms. The specific objectives of the study were

to determine whether a combination of treatment procedures emphasizing self-evaluation training would be effective in:

1. reducing the off-task and disruptive behavior of behaviorally disordered and learning disabled adolescents in the resource class;
2. reducing the off-task and disruptive behaviors of behaviorally disordered and learning disabled adolescents in a regular education class;
3. increasing the percent complete of each academic assignment in the resource class by behaviorally disordered and learning disabled students;
4. increasing the percent correct of each academic assignment in the resource class by behaviorally disordered and learning disabled students;
5. increasing the percent complete of each academic assignment in the regular English class by behaviorally disordered and learning disabled students;
6. increasing the percent correct of each academic assignment in the regular English class by behaviorally disordered and learning disabled students.

CHAPTER II

REVIEW OF LITERATURE

Discipline is a major problem for school systems. Disruptive behavior in school settings requiring some form of disciplinary action runs from minor in-class infractions, through truancy, smoking, and fighting, to such major offenses as drug use, stealing, and assault. In junior and senior high schools, as the students become older, larger, and less easily influenced by teachers, the problems associated with discipline sometimes become acute (McGuire, 1980).

The schools have attempted to deal with these problem behaviors in a variety of ways. Forms of expulsion/suspension and corporal punishment are again becoming the major methods of dealing with serious discipline problems (Gordon, 1981). In an extensive review of discipline programs, Gordon (1981) argued strongly that the little evidence that exists suggests that such programs are in the long term detrimental to all those involved. In all, the increasingly severe approaches to discipline are essentially designed to deal with the public's concern or to remove the offending youth from the school setting. The functional result of such discipline programs is that the responsibility for changing the student's behavior shifts to other social/legal agencies.

Training students to manage their own behavior rather than relying on teachers and other adults has been hypothesized as a more positive and functional means to help students who exhibit behavior problems (Rosenbaum & Drabman, 1979). By teaching self-management skills to students, they may become less dependent on the external control of

others. Consequently, teachers may spend more time on instruction and less time managing students' behavior.

Kanfer's (1975) self-management model appears to be a useful framework from which to investigate the training of self-management skills. Kanfer breaks down self-management into three components: (a) self-monitoring, also called self-reporting or self-recording; (b) self-evaluation; and (c) self-reinforcement. Self-monitoring involves observing one's own behavior. Self-evaluation, according to Kanfer's model, describes a comparison process between the individual's own performance and the performance criterion or goal. Self-reinforcement involves an individual's distribution of rewards to himself contingent on the evaluation of his behavior. In addition to these three components, self-instruction, i.e., self-produced verbalizations that help guide the person's behavior (Meichenbaum & Goodman, 1971), and self-goal-setting, defined by Neilans, Israel, and Pravder (1981) as the process through which a person establishes his or her own performance criteria, have also been investigated as components of self-management.

Control of Disruptive Behavior Through Self-Management Training

Brigham, Hopper, Hill, De Aramas, and Newsom (1985) developed and tested a self-management course that was taught to a group of disruptive students who continued to have problems after an assertive discipline program was established in their middle school. The course focused on teaching students basic behavior analysis principles as well as how to analyze a situation and select the appropriate intervention procedure.

The program was structured as an introductory laboratory science course and required students to carry out exercises and experiments that directly taught the concepts and procedures thought to be important for managing one's own behavior. Student attendance in the after-school program was a requirement placed on them by the school administration. The major dependent variable in the study was the number of detentions received. The program was run in a strictly instructional fashion, and non contingencies were manipulated outside of the self-management class.

As a whole, the results of the three-year program suggested that training students about behavioral principles was effective in teaching the majority of the students how to reduce their frequency of detentions. The students whose number of detentions increased following participation in the course also provided valuable information about possible limitations of the approach implemented in this study. The initial levels of disruptive behavior exhibited by these students was more severe than the behavior of the other participants, and these students were frequently in trouble with legal authorities. These results suggest that a program which relies solely on classroom instruction may not be sufficient for many students who are characterized as predelinquent or delinquent.

Maximizing the Effectiveness of Self-Management Training

The pairing of some type of external controls with self-management strategies, at least initially, and then subsequently using fading procedures to eliminate most of the external controls has been suggested by Rosenbaum and Drabman (1979) as a means of maximizing the effective-

ness of self-management procedures. The importance of pairing external control with self-management techniques is supported by numerous studies (Drabman, Spitalnik, & O'Leary, 1973; O'Leary & Dubey, 1979; Rhode et al., 1983; Smith et al., in press; Turkewitz, O'Leary, & Ironsmith, 1975).

For example, Drabman et al. (1973) used self-evaluation in conjunction with a "matching" technique as a means to gradually transfer reinforcement responsibilities from the teacher to the student in a study in which eight disruptive students were taught reading in a special, one-hour, after-school class. Results demonstrated that initial external reinforcement reduced disruptive behavior and that the use of the self-evaluation procedure produced improved behavior in a nontraining setting. Follow-up data were collected for 12 days upon the termination of the intervention. They revealed that behavioral improvements were maintained at high levels. However, the extent to which students generalized and maintained their improved behavior in regular classrooms or at other times of the day was not examined.

Turkewitz et al. (1975) also examined self-management within a token economy in combination with teacher administration of rewards. Eight disruptive students, ages 7 to 11 years old, were trained to evaluate their behavior and academic work accurately during a special after-school class. While decreases in disruptive behavior were present in the experimental setting at the end of the five-day period following the self-evaluation program, observations made in students' regular classrooms failed to document generalization of improved behavior to those

settings. It should be noted that no attempts were made to teach or prompt students to use their self-evaluation skills in the regular classrooms.

Facilitation of Treatment Gains from
Special to Regular Education Settings

It has been suggested that another advantage of training students to manage their behavior is that newly acquired skills may be more apt to generalize to other settings because the change agent is always present in the new setting (Robertson, Simon, Pachman, & Drabman, 1979). However, as the Drabman et al. (1973) and Turkewitz et al. (1975) studies demonstrate, generalization is not a passive phenomenon that can be expected to occur on its own (Stokes & Baer, 1977). Teaching a student self-management responses does not ensure that those responses will indeed be used. The generalization of self-management skills must be actively programmed, just as the behavior changes that the self-management skills are meant to generalize and maintain must be (Baer, Stokes, Holman, Fowler, & Rowbury, 1981).

An example of the failure of self-management skills to generalize from the training setting is demonstrated in a study reported by Barkley et al. (1980), who attempted to increase the on-task behavior of six hyperactive boys ages 7 to 10. The initial treatment phase consisted of self-instruction training only. Students were taught to (1) listen to the teacher's directions; (2) repeat the directions out loud; (3) describe the directions aloud, in their own words; and (4) check their responses. This intervention was also shown to have no effect on the

rate of on-task behavior for these students. The second treatment phase added a self-monitoring component. Each child was signaled to self-record their on-task behavior during seat work sessions in an experimental classroom at random intervals, by a sound delivered via a tape recorder. The combined self-management components, self-instruction, and self-recording resulted in an increase in on-task behavior in the experimental classroom. However, Barkley et al. (1980) did not find any improvement in regular classroom behavior during the treatment phase of the program.

The purpose of a study reported by Christie, Hiss, and Lozanoff (1984) was to examine the effectiveness of the procedures used in the Barkley et al. (1980) study, but to implement them in a regular classroom, thereby circumventing the need for generalization of behaviors taught in the experimental classroom. Subjects were two fourth grade males who had scored high on a selection instrument for hyperactivity. The regular education teacher was taught to signal the boys when to self-record. It should be noted that the subjects were taught the self-recording procedures by the authors. The regular education teacher's involvement was limited to signaling students and occasionally checking the accuracy of their self-ratings. The results indicated that the self-management program (i.e., self-instruction plus self-recording) was effective in reducing the off-task and disruptive behavior of the two subjects in the regular classroom. While the results of the study extend applications of self-management procedures to the regular classroom, it

does not address the issue of how to facilitate the use of the self-management skills by students in nontraining settings.

Similarly, other studies document the effectiveness of self-management procedures in the special education classroom (Lloyd et al., 1982; Osborne et al., 1987), but do not attempt the generalization of these skills to the regular classroom.

An exception is a study reported by Rhode et al. (1983). The authors developed a program to extend a self-evaluation procedure from a remedial class into students' regular classrooms. Six behaviorally/emotionally handicapped students in the first through fifth grades were initially taught for three hours per week for 15 weeks in a remedial class. Self-evaluation training, which emphasized student and teacher matching of evaluations for student academic work and behavior was combined with external reinforcement to gain control of the students' behavior.

Generalization and maintenance of improved behavior were sought by fading the external reinforcement component of the program in the resource room while gradually transferring behavioral control from the resource teacher to the students. Once acceptable levels of appropriate behavior were maintained with only minimal external reinforcement and teacher monitoring, and students were accurately evaluating their own work and behavior, use of the self-evaluation procedures were extended into the students' regular classrooms for a daily, one-hour work period. The self-evaluation procedures were then gradually faded in the regular

classroom over an eight-week period until a less intense form or no form of intervention remained.

Results of the Rhode et al. (1983) study indicated that behaviorally/emotionally handicapped elementary students can learn to accurately self-evaluate their own academic performance and classroom behavior in one setting and continue to use that skill in another setting. The study provided strong evidence that improvements made and maintained in a short-term remedial class by teaching students to self-evaluate can be transferred and maintained in the students' regular classrooms by implementing a less intense version of the self-evaluation procedures in that setting.

While the Rhode et al. (1983) experiment addressed certain limitations of previous studies (i.e., lack of generalization and maintenance in regular classrooms), further research is still needed to test the generalizability of results to additional special education populations and to other natural settings.

Self-Management Training with Handicapped Adolescents

A study reported by Smith et al. (in press) was designed to address the question of the generalizability of self-management procedures to other special education populations and naturalistic settings. Smith et al. (in press) investigated the effects of self-management training on reducing the acting-out behaviors of behaviorally disordered junior high-aged students in a public school classroom. Students were taught to (1) evaluate and rate their classroom behavior against a standard established

by the classroom teacher, (2) compare their rating with the teacher's rating of the student's behavior, and (3) select reinforcement in exchange for points earned for accurate self-ratings. Teacher ratings were gradually conducted less often as the students' rates of disruptive and off-task behaviors decreased. Students continued to rate themselves and receive points for appropriate behaviors based on the self-ratings. Surprise ratings by the teacher occurred when the teacher felt that students were not rating themselves accurately.

When students were successfully and consistently using the self-management program in the special education class with minimal teacher involvement, students were instructed to use the procedure in their mainstream classrooms. The regular classroom teacher was asked to rate the target student's behavior and then compare that rating with the student's self-rating at the end of each class period. Points earned in the regular classroom were exchanged for privileges, activities, and other rewards in the resource room the following day. Several important questions were answered in this study. First, it was shown that the self-management program alone could function as a classroom management system. It was not necessary to use a separate behavior management program (such as a token economy) to bring the students' behaviors under control before implementing the self-management procedures. Second, the effectiveness of the self-management procedures was demonstrated with behaviorally disordered junior high-aged students in a public school setting.

The findings of this study showed that behavioral gains made by the students in the resource room (i.e., reduced rates of off-task and disruptive behaviors) were not observed in the regular classrooms. The authors viewed this as a failure to implement the abbreviated procedures in the regular classroom rather than a failure of the procedures to facilitate generalization. Regular education teachers had been asked to rate students' behaviors at the end of each class period; however, none consistently rated the students every day. The teachers said they were too busy or had forgotten, and the participants reported that they were too embarrassed to remind teachers to complete the evaluation forms. In general, teachers were either unwilling or unable to implement the procedures even though the requirements placed on the teachers' time were minimal. This problem seems to highlight the difficulties that may arise when secondary teachers are asked by special educators to help implement behavior change programs in their classrooms.

Kiburz et al. (1984) demonstrated the effectiveness of self-recording procedures combined with reinforcement in facilitating the generalization and maintenance of social skills (i.e., greeting and thanking) by an 18-year-old male with behavior disorders in a residential mental health facility. In future studies, it will be necessary to determine the consistency of these effects across different subjects and across a broader range of skills. Also, it would be beneficial to measure the generalization and maintenance of the target social behaviors in a wider array of environmental settings.

Self-recording was also the self-management procedure used in a study reported by Sugai and Rowe (1984) to reduce the out-of-seat behavior of a 15-year-old youth with mild mental retardation. While experimental control was demonstrated in the student's classroom, no attempt was made to assess the generalizability of the experimental effects to other settings.

Although there is little documentation concerning the efficacy of self-management training with adolescents as an intervention to reduce disruptive classroom behavior, there are general indications it is worth considering.

Use of Peers to Assist with Teaching Self-Management Skills

The use of peers in the self-management training process may be a useful strategy to facilitate the generalization and maintenance of improved behavior from the special education classroom to the regular classroom. First, peer mediation would eliminate the necessity for the continuous presence of the teacher (Strain & Kerr, 1981). Given the high pupil-teacher ratios found in many regular education settings, it is questionable how often teachers can spend large amounts of time systematically observing individual students. Similarly, the peer, in serving as a paraprofessional, may provide individualized attention to a particular student (O'Leary, 1972). Additionally, peers present in the natural environment may facilitate generalization and maintenance of behavior change (Stokes & Baer, 1977). Although peers have been shown to be effective mediators of behavior change, their effectiveness as

generalization facilitators is unclear and warrants further investigation (Kalfus, 1984; Ragland, Kerr, & Strain, 1981). In addition, research is limited with adolescent peer mediators with regard to handicapped adolescent populations.

One study which examined the effects of using adolescent peers as mediators in behavior change programs with handicapped adolescents did so in the context of training social skills in an academic setting (Cheney, 1987). The purpose of the study was to examine the effects of the use of peer tutors on the acquisition and generalization of specific social skills of handicapped adolescents. Training included discussion, modeling, role-play, rehearsal, coaching, and discrimination training with the nonhandicapped peer tutors providing coaching and feedback to three behaviorally handicapped target students in role-play and rehearsal situations across settings and persons. Results of the study demonstrated that peer tutors had a positive effect in facilitating acquisition and generalization of specific social skills by the handicapped adolescents.

While the results of this study are encouraging, further research on the use of peer mediators as facilitators of generalization and maintenance should be substantiated and extended to include behaviors other than social skills. In particular, no study has been reported on the use of adolescent peer mediators in self-management training programs.

Self-Management of Academic Behaviors

Researchers have argued that it is not only attending (e.g., looking and listening) but making an active academic response that is crucial to

learning (Baer & Bushell, 1981; Graden, Thurlow, & Ysseldyke, 1983). However, there are at least two reasons why behaviorally disordered and learning disabled youth may lack control over their academic responding. First, these students typically do not organize materials and/or their time in a productive fashion when problem solving (Leone, 1983). Second, such behaviors as distractibility and impulsivity often get in the way of effective performance (Davis, Uhler, & Kelly, 1986). Thus, self-management of academic performance variables appears to be a promising research direction.

Of the studies which have examined the effectiveness of self-management strategies on academic variables by special education students, the majority have been conducted with the learning disabled population. For example, Ballard and Glynn (1975) found a combination of self-assessment, self-recording, and self-reinforcement effective in improving the story writing of elementary, learning disabled students. Knapczyk and Livingston (1973) demonstrated that junior high school, learning disabled students could accurately record their own reading scores. Lovitt (1973), in a series of studies, demonstrated that elementary learning disabled pupils could successfully schedule, assess, record, set standards, and establish contingencies for their academic work.

Harris and Graham (1985) conducted a study to determine whether a self-instruction strategy was effective in improving learning disabled students' compositions. Students were taught to "think aloud" the steps necessary to (a) get started, (b) help write the story, and (c) evaluate

the story. Results indicated students' use of selected parts of speech increased substantially above baselines as did mean number of words per story. Generalization probes in the students' resource class demonstrated treatment gains in that setting as well.

Self-instruction has been investigated as a self-management strategy which might influence the academic responding of students with behavior disorders as well as those with learning disabilities (Meichenbaum & Goodman, 1971). The approach involves getting the student to emit self-directive verbal statements to help guide his or her behavior accordingly. In a study reported by Davis and Hajicek (1985), seven severely behaviorally disordered, junior high school-aged students were taught to verbalize to themselves the steps necessary to complete a multiplication problem involving fractions. Attention and accuracy rate improved significantly following the self-instructional training. The results provided evidence that self-instructions can enhance performance of behaviorally disordered students directly in the context of an academic task.

An additional strategy designed to teach students to manage their own behavior is that of goal setting. Teachers of students with learning disabilities and behavior disorders typically set goals for the students they work with. But teaching students to set their own goals, both academically and behaviorally, is thought by some to be an important component of self-management. Kazdin (1974) state that in the process of goal setting, the student (1) becomes aware of possible problem behaviors and verbalizes them and (2) makes a commitment to change those behaviors.

This commitment to change is seen by some researchers as crucial if students are to assume responsibility for their own behavior (Young et al., 1987). Research on goal setting with learning disabled and behaviorally disordered adolescents is particularly lacking.

Summary

There is evidence to suggest that didactic instruction alone is not sufficient in facilitating student use of self-management strategies (Brigham et al., 1985). There are also data to support the use of the self-evaluation procedure, which pairs teacher and student ratings, as a means to reduce the off-task and disruptive behavior of elementary-aged students in remedial settings (Drabman et al., 1973; Turkewitz et al., 1975). Additionally, behaviorally handicapped elementary-aged students can learn to evaluate their own academic performance and classroom behavior in a remedial setting and then continue to use that skill in their regular classroom (Rhode et al., 1983).

One study assessed the effectiveness of the matching procedure with junior high school students in a public school classroom and found it to be a successful strategy in reducing problem behavior of target students in the special education class (Smith et al., in press). However, behavioral gains were not observed in the regular classroom. Therefore, while the teacher/student matching procedure trains students to accurately evaluate their behavior and may be effective in reducing off-task and disruptive behavior in the training setting, evidence suggests that further research is required to assess under what conditions the self-evaluation skills may generalize to nontraining settings.

The use of peer mediators to facilitate the use of self-management skills in nontraining settings was discussed as a possible alternative to the involvement of the regular classroom teacher. The time constraints of teachers as well as the possible benefits of the peer's presence in other nontraining settings were the rationales given for the use of peers. There are few studies which report the use of peer mediators to facilitate the generalization of behavioral gains made in secondary level school settings by handicapped students. Further, there are no studies that report the use of peers in self-management training programs.

The majority of studies that examine the self-management of academic performance variables with the handicapped population appear to concentrate in the area of learning disabilities. Self-instruction strategies, self-recording of work performance, and goal setting seem to be effective strategies with this population, but all need to be validated further and extended to secondary-aged behaviorally handicapped students.

CHAPTER III

METHOD

Subjects

Handicapped students. Eight males from three special education classrooms served as subjects in the study. All were formally evaluated and placed into resource rooms by a multidisciplinary child study team. Table 1 shows the subjects' age, special education classification, placement, intellectual functioning, and reading level. Intellectual functioning was measured by the Wechsler Intelligence Scale-Revised (WISC-R) (Wechsler, 1974) or the Slosson Intelligence Test (SIT) (Slosson, 1971). Reading level was measured by the Woodcock Reading Mastery Tests (Woodcock, 1973).

Subjects were selected from the group of all special education students at the high school with learning disabilities or behavior disorders who needed 10th grade English credit. Of the approximately 12 students who met this requirement, eight were recommended as participants in the study by the special education teachers. Teachers recommended students who required a lot of teacher management to remain on-task and complete assignments on time.

Subjects 1, 2, and 3 were classified as learning disabled and were placed in the resource room during the same period of the day. Problem behaviors for Subject 1, as reported by the special education teacher, included daydreaming during both special and regular education class periods, as well as a failure to complete and turn in academic assignments. Baseline levels of off-task behavior, measured during 30-minute

Table 1

Subject Characteristics

Subject 1

Age	15
Classification/placement	LD / Resource: 3 periods
IQ (WISC-R)	102
Grade equivalent - reading	7.3

Subject 2

Age	16
Classification/placement	LD / Resource: 3 periods
IQ (SIT)	109
Grade equivalent - reading	6.6

Subject 3

Age	16
Classification/placement	LD / Resource: 3 periods
IQ (SIT)	88
Grade equivalent - reading	6.8

Subject 4

Age	15
Classification/placement	BD / Resource: 3 periods
IQ (WISC-R)	102
Grade equivalent - reading	8.1

(table continues)

Table 1 (continued)

Subject 5

Age	15
Classification/placement	BD / Resource: 2 periods
IQ (WISC-R)	81
Grade equivalent - reading	5.7

Subject 6

Age	17
Classification/placement	BD / Resource: 4 periods
IQ (SIT)	104
Grade equivalent - reading	8.3

Subject 7

Age	16
Classification/placement	LD / Resource: 4 periods
IQ (WISC-R)	85
Grade equivalent - reading	6.5

Subject 8

Age	16
Classification/placement	LD / Resource: 4 periods
IQ (SIT)	92
Grade equivalent - reading	6.2

seat-work periods, in the special education class averaged 11% and ranged from 1% to 26%. Talk-outs during baseline averaged only 3% and ranged from 0% to 5%. In the regular education class, baseline rates of off-task behavior averaged 9% and ranged from 0 to 53%. Talk-outs in that setting also averaged 9% and ranged from 0 to 53%. Subject 2 exhibited similar problem behaviors during baseline sessions in the special education class. The teacher reported that he was sluggish and lethargic, and often fell asleep in class. In the regular class, problems behaviors were reported to include chronic tardiness and absences as well as not completing in-class assignments. During independent seat-work sessions, Subject 2 talked frequently to other students about nonacademic topics. He seldom completed or turned in academic assignments. Baseline levels of off-task behavior in the special education class averaged 6% and ranged from 2% to 11%. Talk-outs averaged 2% and ranged from 0 to 2%. In the regular class, off-task behavior averaged 58% during baseline and ranged from 15% to 95%. Talk-outs in the regular class averaged 49% and ranged from 1% to 100%. Subject 3 was reported to be easily distractible. During independent work sessions in both the regular and special classrooms, he talked to other students about nonacademic topics. He rarely completed or turned in academic assignments. Off-task behavior in the special education class averaged 41% and ranged from 16% to 45% during baseline conditions. Talk-outs averaged 21% and ranged from 0 to 53%. In the regular education class, Subject 3 averaged 54% off-task behavior, which ranged from 1% to 100%. Talk-outs averaged 19% and ranged from 0 to 44% during baseline.

Subjects 4, 5, and 6 were classified as behaviorally disordered and were placed in the same resource class for part of their school day.

Problem behaviors for Subject 4, as reported by the special education teacher, included frequent oppositional comments made to the classroom teacher, loud talking to other students during independent work periods, and a failure to complete and turn in assignments. In the special education class, his off-task behavior averaged 30% and ranged from 6% to 100% during baseline conditions. The average rate of talk-outs in that setting was only 3% and ranged from 0 to 16%. Problem behaviors were more pronounced in the regular education class. Off-task behaviors in the regular class averaged 57% and ranged from 0 to 100% during baseline. Talk-outs were similarly high, averaging 50% and ranging from 0 to 92%. Subject 5 exhibited similar problem behaviors. For example, his teacher reported that he would make numerous negative comments regarding school work, was slow to follow teacher directions, and frequently talked to other students during independent seat work sessions when the teacher had stipulated no talking. Subject 5 would often turn in assignments that were not complete or accurate. His average baseline rate of off-task behavior in the special education class was 23% and ranged from 0 to 54%. Talk-outs averaged 6% and ranged from 0 to 16%. In the regular class, off-task behavior averaged 54% and ranged from 21% to 100% during baseline. Talk-outs also averaged 54% and ranged from 21% to 100%. Problem behaviors for Subject 6 included talking during seat work periods when the teacher had requested no talking, making oppositional comments, and complying slowly to teacher

requests. Assignments were turned in on time, but without attention to accuracy or neatness. His average rate of off-task behavior in the special education class was 37%, ranging from 3% to 95%. Talk-outs in that setting during baseline averaged 5% and ranged from 0 to 20%. In the regular class, off-task behavior averaged 55% during baseline and ranged from 1% to 100%. Talk-outs averaged 18% and ranged from 0 to 76%.

The two participating students from the third special education classroom were classified as learning disabled. Their teacher reported that Subject 7 was shy and withdrawn. He failed to ask questions when he didn't understand an assignment and would answer questions from the teacher only when spoken to several times. He worked very slowly on assignments and often failed to turn them in. He interacted with only one other student in the regular class. His average rate of off-task behavior during baseline in the special education classroom was 4%, ranging from 0 to 10%. Talk-outs averaged 3% and ranged from 0 to 10%. In the regular class, off-task behavior averaged 15% during baseline and ranged from 0 to 66%. Talk-outs in that setting averaged 12% and ranged from 0 to 66%. Problem behaviors for Subject 8 consisted mainly of talking during periods when the teacher had requested no talking. Baseline levels of off-task behavior in the special education class averaged 10% and ranged from 4% to 20%. Talk-outs averaged 9% and ranged from 5% to 21%. In the regular class, off-task behavior averaged 21% and ranged from 1% to 85%. Talk-outs in that setting ranged from 0 to 62% and averaged 10% during baseline.

Nonhandicapped peer monitors. Nine students (three females and six males) from the regular education English class into which all of the handicapped students were mainstreamed served as peer monitors. Criteria for selection as a peer monitor were taken from a review by Kalfus (1984) of peer-mediated interventions. They included an expressed interest on the part of the peer to be a mediator, regular school attendance by the peer, an ability to learn the necessary discriminations (e.g., correct responses), as well as a willingness and ability to follow teacher directions in a consistent manner. In addition, parental permission for students to serve as peer mediators was obtained. Appendix A is the letter and consent form sent to parents.

Settings

Special education classrooms. Participants were drawn from three special education classrooms at a rural high school in a Western state. Two of the classrooms were resource rooms that served approximately 15 students and were staffed with one teacher, an aide, and a student teacher from a local university. Students in these classes were classified as behaviorally disordered or learning disabled. Twelve students were assigned to the third special education class, which was also staffed with a teacher, aide, and student teacher. Students in this classroom were classified as intellectually handicapped or learning disabled and remained in that class through the majority of the school day. Instruction in all three classes consisted of small group instruction, individual tutoring, and independent seat work. Classes met on an odd-even schedule, i.e., class periods 1, 3, 5, and 7 met every other

day, as did periods 2, 4, 6, and 8. Each class period was 85 minutes long.

Regular education classroom. All of the participants in the study were enrolled in a regular education, 10th grade English class which had a total enrollment of 29 students. Instruction in the regular class consisted of group lectures and discussion sessions, small group instruction, and independent seat work.

The experimenter was the teacher in the regular class by special arrangement with the school principal and district personnel. This was done because the regular teacher was reluctant to have observers in her class.

Measurement Systems

Two measurement systems were used in this study: (1) a 10-second partial interval observation code used to measure participants' rates of off-task behavior and talk-outs, as well as the classroom teachers' rates of reinforcement (Appendix B); and (2) measures of academic performance which included the percent correct and the percent complete of academic assignments.

Interval observation system. The following categories of behavior were scored during each observation session. Each category could be scored in the same interval.

Student behavior: 1. Off-task behavior was defined three ways. First, the student was recorded as being off-task if he or she was not using academic materials appropriately. For example, the student may have his textbook closed during reading period, or may be flipping the

pages back and forth. The student may be scribbling, doodling, or writing notes to friends instead of writing an assignment. Also, the student was recorded as being off-task if he or she was out-of-seat without permission. Examples include sharpening a pencil, walking up to the teacher's desk, or walking to the back of the room, all without first gaining permission to do so. Last, a student was recorded as being off-task if he or she was not looking at their assigned task for longer than 10 seconds.

2. Talk-outs were defined as: (a) talking to another student or muttering to oneself; (b) making oppositional comments such as, "I don't want to do this," "This is stupid"; (c) swearing, taunting, teasing, or yelling across the room to the teacher or another student; (d) interrupting the teacher or another student who is appropriately addressing the class; or (e) vocally or nonvocally producing noises such as pencil tapping, foot tapping, rocking in chair, or tearing paper.

Teacher behavior: Reinforcement was defined as: (a) giving approval in the form of verbal praise or approving gestures to the target student; (b) awarding of points, food, magazines, school supplies, or other tangibles to the target student; or (c) awarding free time, allowing the student to leave class early, or other activity reinforcers to the target student.

Three observers from the local community were hired to collect observation data. Requirements for employment included a personal interview, a willingness on the part of the applicant to commit to

training until mastery of the observation procedures was achieved, and their availability during required observation times each day.

The observers were trained by the author and another graduate student for approximately one month prior to commencement of the study. Observers were taught the operational definitions of the behaviors to be observed and how to code those behaviors using the interval system. Practice data were collected on students selected at random in both the regular and special education classrooms until observers reached a reliability criterion of 90% in both settings. The practice observations also served to acclimate students in the special and regular classrooms to the presence of the observers. Observers remained approximately 10 feet from students during observation sessions. Students were observed during half-hour seat-work periods in both regular and special classrooms.

Academic data. Academic data were collected and scored daily in both regular and special classrooms. In both settings, students were assigned academic work to be completed during in-class seat-work sessions. Assignments were designed to take three class periods to complete. Assignments included dictionary exercises, reading short stories, paraphrasing short stories, and answering comprehension questions. Students were not allowed to take this work home or to work on the assignment during other class times. Teachers in both regular and special education classes scored students' academic performance at the end of each class session. The percent of the total assignment completed and the percent of the total assignment correct were recorded.

Interobserver agreement. Interobserver agreement was assessed weekly on each subject in both the regular and special education classrooms. Separate interobserver agreements were calculated by dividing the number of agreements by the number of agreements plus disagreements and then multiplying by 100. Separate interobserver agreements were calculated for occurrences and nonoccurrences of student behaviors in each condition for each participant. Interobserver agreement on teacher reinforcement rates were obtained in each setting as well.

Interobserver agreement for the occurrence of student behaviors in the special education classrooms for Subjects 1, 2, and 3 averaged 89% and ranged from 79% to 100% throughout all conditions. Interobserver agreement on the nonoccurrence of student behaviors by Subjects 1, 2, and 3 in the special education class averaged 98% and ranged from 92% to 100%. Interobserver agreement for the scoring of teacher reinforcement rates in the special education class averaged 91% and ranged from 0 to 100%.

Interobserver agreement for the occurrence of behaviors by Subjects 4, 5, and 6 in the special education classroom averaged 89% and ranged from 83% to 98% across all conditions. Interobserver agreement for the nonoccurrence of behavior by Subjects 4, 5, and 6 averaged 93% and ranged from 86% to 100%. Interobserver agreement of teacher reinforcement averaged 97% in the special education class and ranged from 88% to 100%.

Interobserver agreement for the occurrence of behaviors scored for Subjects 7 and 8 in the special education classroom averaged 85% and ranged from 78% to 100%. Interobserver agreement averaged 92% for

nonoccurrence and ranged from 86% to 100%. Interobserver agreement for teacher reinforcement averaged 90% and ranged from 84% to 100%.

Interobserver agreement on the occurrence of student behaviors in the regular class averaged 94% and ranged from 88% to 100%. Agreement on the nonoccurrence of behaviors averaged 97% and ranged from 95% to 100%. Interobserver agreement of teacher reinforcement in the regular class averaged 98% and ranged from 94% to 100%.

Interobserver agreements were also obtained on the scoring of at least two academic assignments from every student in each condition in both special and regular classes. Xerox copies of student assignments were made and given to the regular education and special education teachers who both scored the assignments for accuracy. Agreements were scored when both teachers marked a response correct or incorrect. A disagreement was scored when one teacher scored a response correct and the other scored it as incorrect. Interobserver agreement was calculated by dividing the number of agreements by the number of agreements plus disagreements and then multiplying by 100. Interobserver agreement for the percent of assignments correct averaged 95% and ranged from 90% to 100% in both settings.

Intervention Components and Experimental Conditions

Components of the self-management intervention included: student self-ratings, comparing or "matching" of student ratings with teacher ratings, academic goal setting, peer training, and matching of student

ratings with peer ratings. These components are described below as are the experimental conditions.

Baseline. No experimental procedures were in effect. Students were assigned academic work to be completed over three days during independent seat-work sessions. Direct observation of classroom behavior during work sessions as well as the scoring of academic work occurred during baseline.

Student self-rating. In this condition, students were taught to rate their classroom behavior on a five-point scale. The special education teacher instructed the class that a new behavior management program would be in effect during seat work. She then stated the classroom rules and provided a rationale as to their importance. Examples and nonexamples of each rule were modeled by the teacher and students were provided an opportunity to role-play the examples. The teacher then explained the five-point rating scale to the students. The first step was to explain how classroom behavior corresponded to each rating:

5 = excellent -- A rating of "5" meant that the student followed all of the classroom rules throughout the entire interval. The student required no warnings or reminders from the teacher to be on-task.

4 = good -- A rating of "4" meant that the student followed the classroom rules throughout the interval, with the exception of one minor infraction. For example, the student may have called out for assistance without first raising his hand, but when informed of the rule violation, immediately raised his hand or returned to work.

3 = satisfactory -- A rating of "3" meant that the student followed the classroom rules most of the time during the interval, with the exception of two reminders or warnings from the teacher to return to work. Following a reminder from the teacher as to what rule the student was violating, the student quickly returned to work.

2 = needs improvement -- A "2" rating meant that the student worked and followed the rules for approximately half of the interval. Two warnings from the teacher may have been required but the student may not have returned to work immediately. The second warning may have been a repeat request to return to work.

1 = unsatisfactory -- A rating of "1" meant that the student failed to work or follow the classroom rules for most of the interval. The teacher may have given three or more warnings or reminders to return to work. The student may have been separated from the group.

Following the description of the above scale, students were asked to identify what rating should be given to behaviors which were modeled by the teacher. The teacher provided three examples in a random order of behaviors that corresponded to each rating. Students were instructed that the ratings corresponded to points that could be exchanged for edible, tangible, and/or activity reinforcers. Appendix D is a list of reinforcers that were available to students.

The final step in training students to rate their behavior was a description of the student/teacher matching procedure. Students were told that they would rate their behavior using the five-point scale, every 10 minutes during seat work. The teacher would also rate their

behavior using the same scale. At the end of each 10-minute interval, the students would be required to compare or match their self-rating with the teacher's. If the two ratings matched, the student would receive the number of points that corresponded with the rating plus one bonus point, awarded for a "perfect" match (e.g., the student would receive 3 points if both he and the teacher rated his behavior as a 3, plus he would receive one bonus point for a perfect match, for a total of 4 points awarded for that interval. If the teacher and student ratings were off by one in either direction (called a "next door match"), the student received the number of points that corresponded to the teacher's rating (e.g., if the teacher rated the student's behavior as a 3 and he rated it as a 4, then the student received 3 points for that interval). Finally, if the teacher and student ratings were off by more than one (referred to as "no match"), then no points were awarded.

Matching student ratings with teacher ratings. The above instructional session was immediately followed by a 30-minute, independent, seat-work period. Students were given a point card on which they would record their ratings (Figure 1). Initially, students would rate their behavior every 10 minutes. The teacher signaled the beginning of the first 10-minute interval by setting a timer, whereby students were to begin working on their assignments. During this time, the teacher circulated around the room and recorded specific instances of behavior so that her ratings and feedback to students would be accurate. Figure 2 is a sample teacher rating form. At the end of the first 10 minutes, the timer went off and students were instructed to rate their behavior by

BEHAVIOR POINT CARD

Name _____

Date _____

0 = Student's rating; / = Teacher's rating

1st Rating:

0 1 2 3 4 5

Points _____

+ Bonus _____

= Total _____

2nd Rating:

0 1 2 3 4 5

Points _____

+ Bonus _____

= Total _____

3rd Rating:

0 1 2 3 4 5

Points _____

+ Bonus _____

= Total _____

Total points for 1st rating _____

+ Total points for 2nd rating _____

+ Total points for 3rd rating _____

Total _____

Average rating (total / 3) _____

Figure 1. Behavior Point Card / Match three times.

TEACHER RATING FORM

Week of _____

Student	Rating 1	Rating 2	Rating 3	Rating 1	Rating 2	Rating 3

Figure 2. Teacher Rating Form.

marking their point card. At this time, the teacher circulated around to see each student and recorded her rating on their point card. Students were instructed to immediately return to work after they had given themselves a rating because the next 10-minute interval started as soon as the first interval ended. This procedure was repeated three times during the 30-minute session. At the end of the session, students were instructed to tally up the number of points they had earned throughout the three rating periods. Points were exchanged for backup reinforcers at this time.

Academic goal setting. During this condition, students were taught to set daily academic goals. Point cards were modified to include a space for students to label, sequence, and divide classroom assignments (Figure 3). The label component required students to write down all new or unfinished assignments. The next step involved sequencing all of the tasks necessary to complete the assignments. Finally, students were required to divide the tasks across the number of days needed to complete the assignments. This final step resulted in a daily academic goal.

After the match three times condition had been in place for three days, students were trained to label, sequence, and divide assignments. Students continued to rate their behavior three times during the class period but now, in addition to receiving points for classroom behavior, they received points for accurately completing the label, sequence, and divide steps. One point was awarded for each of the steps successfully completed and a bonus point was awarded for completing all three.

POINT CARD

Name _____ Date _____

GOAL SETTING

Points

Label: 0 1

Sequence: 0 1

1.

2.

3.

Divide: 0 1

Bonus = 0 1

Total = _____

BEHAVIOR

1st Rating:

0 1 2 3 4 5

Points _____

+ Bonus _____

= Total _____

2nd Rating:

0 1 2 3 4 5

Points _____

+ Bonus _____

= Total _____

3rd Rating:

0 1 2 3 4 5

Points _____

+ Bonus _____

= Total _____

Total number of goal setting points = _____

Total number of behavior points = _____

Total number of points earned = _____

Figure 3. Goal setting and behavior rating point card:
 Label, sequence, divide / Match three times.

Fading of Matching Procedures

Sequence and divide. After one week of labeling, sequencing, and dividing their academic assignments, students requested that they no longer be required to complete the label step. They felt that the label and sequence steps were redundant. As a result of their request, students were no longer required to label their assignments on their point card (Figure 4). Instead, goal setting now included only the sequence and divide steps.

Match twice. The number of times students were required to rate their behavior during class seat-work sessions was reduced from three times to twice during this condition. Instead of rating their behavior every 10 minutes, students now rated their behavior every 15 minutes. This condition was implemented when the majority of students in the special education class had rated their behavior as a 4 or 5 and had perfect or next-door matches with their teacher on at least three consecutive days. The point card on which students recorded their ratings was modified to reflect this new requirement (Figure 5). Students continued to sequence and divide their academic assignments during this condition. The price of backup reinforcers remained the same during this condition.

Match once. During this condition, students were required to rate their behavior once at the end of the 30-minute seat-work session (Figure 6). This condition was implemented when the majority of students in the special education class had received behavior ratings of 4 or 5 and

POINT CARD

Name _____ Date _____

GOAL SETTING

Points

Sequence:

0 1

1.

2.

3.

Divide:

0 1

Bonus = 0 1

 Total = _____

BEHAVIOR

1st Rating:

0 1 2 3 4 5

Points _____

+ Bonus _____

= Total _____

2nd Rating:

0 1 2 3 4 5

Points _____

+ Bonus _____

= Total _____

3rd Rating:

0 1 2 3 4 5

Points _____

+ Bonus _____

= Total _____

Total number of goal setting points = _____

Total number of behavior points = _____

Total number of points earned = _____

Figure 4. Goal setting and behavior rating point card:
 Sequence and divide / Match three times.

POINT CARD

Name _____ Date _____

GOAL SETTING

Points

Sequence:

0 1

1.

2.

3.

Divide:

0 1

Bonus = 0 1

Total = _____

BEHAVIOR

1st Rating:

0 1 2 3 4 5

Points _____

+ Bonus _____

= Total _____

2nd Rating:

0 1 2 3 4 5

Points _____

+ Bonus _____

= Total _____

Total number of goal setting points = _____

Total number of behavior points = _____

Total number of points earned = _____

Figure 5. Goal setting and behavior rating point card:
 Sequence and divide / Match twice.

POINT CARD

Name _____ Date _____

GOAL SETTING

Points

Label: 0 1

Sequence: 0 1

1.

2.

3.

Divide: 0 1

Bonus = 0 1

Total = _____

BEHAVIOR

Rating:

0 1 2 3 4 5

Points _____

+ Bonus _____

= Total _____

Total number of goal setting points = _____

Total number of behavior points = _____

Total number of points earned = _____

Figure 6. Goal setting and behavior rating point card:
 Sequence and divide / Match once.

matched perfectly or had next-door matches with the teacher on three or more consecutive days.

Match once and set daily academic goals. The label and sequence steps were eliminated during this condition. Students were required to write down their daily academic goal; that is, how much work they planned to accomplish that day. The point card used during this condition provides a space for students to write down a daily goal and a space for marking whether or not they achieved that goal. Two points were awarded for setting an appropriate goal, as determined by the teacher, 3 points for meeting the goal, and 4 bonus points for completing the three-day assignment. Students continued to rate their behavior at the end of the session and to match their rating with the teacher (Figure 7).

Goal-set only. During this condition, students continued to receive point for setting appropriate academic goals and for achieving those goals. However, they were no longer required to rate their classroom behavior (Figure 8). This condition was implemented when the majority of students in the special education class had received behavior ratings of 4 or 5 during the match once condition, and had been matching perfectly with their teacher for three consecutive days.

Self-rating in the Regular Education Classroom

Peer training. The training of regular education peers took place two weeks before subjects began the self-evaluation procedure in the regular class. Training took place in an empty classroom and was conducted by the special education teacher. Instruction was similar to

POINT CARD

Name _____ Date _____

GOAL SETTING

Today's goal: (2) _____

Did I meet my goal? yes or no
 If yes, give yourself 3 points (3) _____

Bonus points for completing
 ENTIRE assignment: (4) _____

Behavior Rating:

0 1 2 3 4 5

Points _____
 + Bonus _____

Total _____

Figure 7. Goal setting and behavior rating point card:
 Daily goal / Match once.

POINT CARD

Name _____ Date _____

GOAL SETTING

Today's goal: (2) _____

Did I meet my goal? yes or no
If yes, give yourself 3 points (3) _____

Bonus points for completing
ENTIRE assignment: (4) _____

Total _____

Figure 8. Daily goal point card.

that provided to the handicapped students. Peers were told how the program worked and that they would be rating another student's classroom behavior and providing feedback to that student regarding his behavior. Appropriate behaviors were modeled by the special education teacher, then role-played with the peers during the training sessions. In addition, peers practiced giving feedback in a positive, constructive manner. For example, they were instructed to first describe what behaviors were performed correctly. This was to be followed by specific feedback about why the peer gave the student a particular rating.

Confidentiality was stressed during the training sessions and throughout the duration of the study. Peers were told that all information regarding the behavior of the person they were rating was to remain confidential. Peers were also instructed that because they were expected to model appropriate behavior during the rating periods, they would receive the maximum number of daily points allotted by the program and that those points could be exchanged for the same reinforcers available to the subjects.

Instruction as to which behaviors corresponded to each rating proceeded in a fashion similar to the instruction provided students in the special education classroom. Examples and nonexamples of at least three behaviors that corresponded to each rating were presented. Students were asked to role-play the examples, then practiced matching ratings to behaviors modeled by the teacher.

To verify that peers actually rated the behavior of their classmates, peers were first asked to rate their own behavior during several

seat-work sessions in the regular English class. The special education teacher rated the peers' class behavior. Her ratings were matched with the peers' self-ratings. The teacher also modeled how to provide praise and corrective feedback.

Peer matching. Once the rate of student's talk-outs and off-task behavior in the special education class had decreased to below 10% for at least five consecutive class sessions, students were instructed to rate their behavior three times (every 10 minutes) in the regular English class as well. Peers and special education students met beforehand and received instruction as to who would be rating whom during the seat-work periods. They were told that the English teacher would cue them unobtrusively as to when the end of the 10-minute interval occurred. For example, the teacher would announce to the class that they had been working for 10 minutes and that they had 20 minutes left. This was so as not to draw attention of other class members. Points were tallied and exchanged for the same reinforcers available in the special education class. At the end of each class period, the regular education teacher made the reinforcers available to the subjects and peers.

Match once. Initially, subjects rated themselves and matched their ratings with peers three times during regular education English. After at least three consecutive class periods with ratings of 4 or 5 and achieving perfect matches with the peer, subjects were required to rate their behavior only once, at the end of the seat-work session.

Experimental Design

The effects of the self-management training program in reducing talk-outs and off-task behavior were demonstrated in a multiple baseline design across subjects in the three special education classrooms. Intervention was initiated first in the 2nd period special education class with Subjects 1, 2, and 3. Subjects 4, 5, and 6, who were enrolled in the 1st period special education class, received self-management training second, and students enrolled in another 1st period special class, Subjects 7 and 8, received training third.

A multiple baseline design across subjects was used to assess the generalization of treatment gains made in the special education class to the regular education English class. Once it was demonstrated that generalization had not occurred in the regular class, the self-management procedures were implemented in the regular class. Subjects 1, 2, and 3 implemented the self-evaluation procedures first, followed by Subjects 4, 5, and 6. Subjects 7 and 8 implemented the procedures last.

CHAPTER IV

RESULTS

Observation Data

Off-task behavior in the special education classroom. Figures 9, 10, and 11 present the percentage of intervals each subject engaged in off-task behavior in the resource rooms. The mean rate and range of off-task behavior for each subject across baseline and intervention phases is presented in Table 2. For all subjects, with the exception of Subject 2, off-task behavior decreased following the implementation of the matching procedure. The decrease averaged 13%, and ranged from 2.5% to 33%. The largest decreases were observed in Subjects 3, 4, 5, and 6, whose initial baseline levels were above 20%. However, subjects with baselines below 20% also decreased their percentage of off-task behavior to below 3% during the matching phases.

Little variability in the data was observed once the matching procedures were implemented. Off-task behavior decreased immediately, and remained low throughout all matching phases for all subjects. Following the removal of the matching procedure, however, an increase in off-task behavior was observed in five out of the eight subjects. The average increased from the matching to goal-setting phase was 5%. Subject 6 was the exception. His mean rate of off-task behavior increased approximately 20%, from an average of 4.2% off-task during matching to 24% during the goal-set only phase.

Talk-outs in the special education classroom. Figures 9, 10, and 11 show the percentage of talk-outs in the special education classrooms

Table 2

Mean Percentage and Range of Occurrence of Off-task and Talk-out Behavior

Subject	Special Education		Regular Education	
	Baseline	Intervention	Baseline	Intervention
1	11 (1-27)	1.4 (0-15)	9 (0-53)	3.5 (0-20)
2	6 (3-10)	8.6 (2-46)	58 (6-98)	10.0 (0-31)
3	41 (11-81)	6.0 (0-28)	54 (2-98)	4.5 (0-16)
4	30 (1-100)	3.1 (0-15)	57 (0-93)	2.4 (0-57)
5	23 (1-53)	1.2 (0-11)	54 (24-98)	6.3 (1-20)
6	37 (3-96)	4.2 (0-55)	55 (1-98)	7.0 (1-18)
7	4 (0-1)	1.5 (0-8)	15 (0-68)	2.3 (0-5)
8	10 (3-21)	4.6 (0-39)	21 (2-85)	13.0 (2-42)

Mean Percentage and Range of Occurrence of Talk-out Behavior

Subject	Special Education		Regular Education	
	Baseline	Intervention	Baseline	Intervention
1	3 (0-5)	.5 (0-3)	9 (0-53)	3.5 (0-20)
2	2 (0-3)	.5 (0-3)	49 (0-98)	4.0 (0-21)
3	21 (2-52)	.8 (0-18)	19 (1-44)	.8 (0-5)
4	3 (0-14)	1.2 (0-4)	50 (1-93)	8.5 (0-57)
5	6 (0-13)	.5 (0-1)	54 (22-98)	5.0 (2-20)
6	5 (0-17)	.5 (0-5)	18 (0-76)	2.0 (0-12)
7	3.5 (0-10)	1.7 (0-6)	12 (0-68)	2.3 (0-5)
8	9 (5-21)	.5 (0-6)	10 (0-62)	13.0 (0-42)

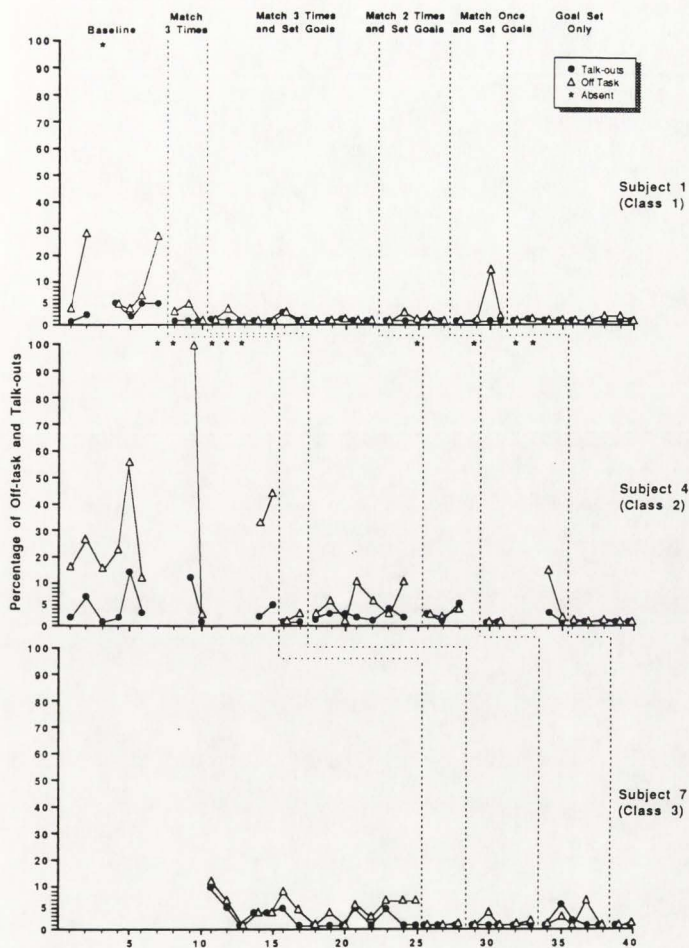


Figure 9. Percentage of intervals scored as off-task and talk-outs for for Subjects 1, 4, and 7 in their special education classes.

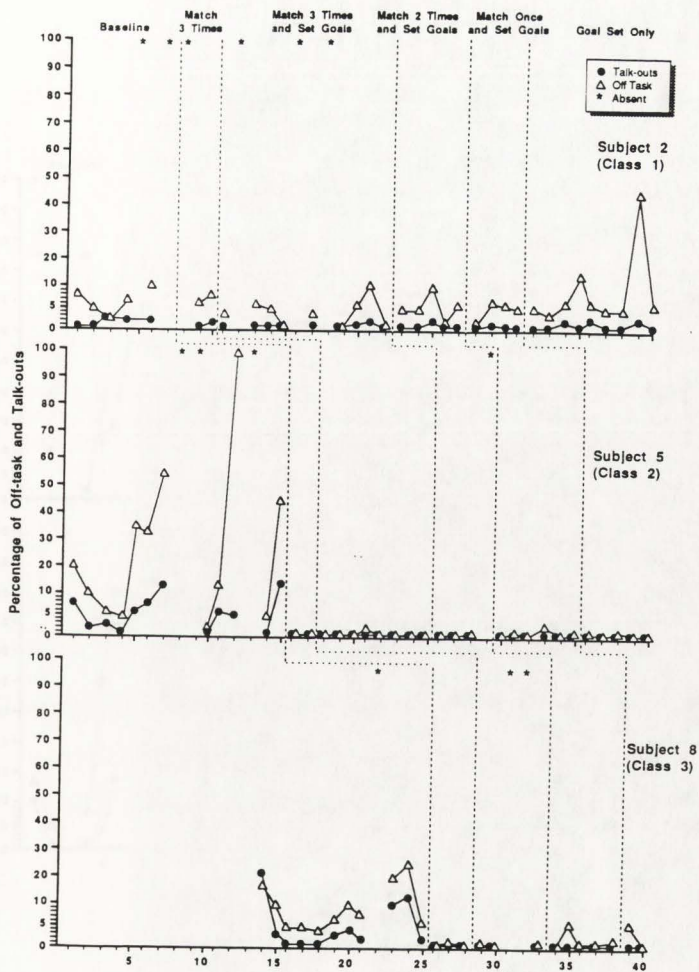


Figure 10. Percentage of intervals scored as off-task and talk-outs for Subjects 2, 5, and 8 in their special education classes.

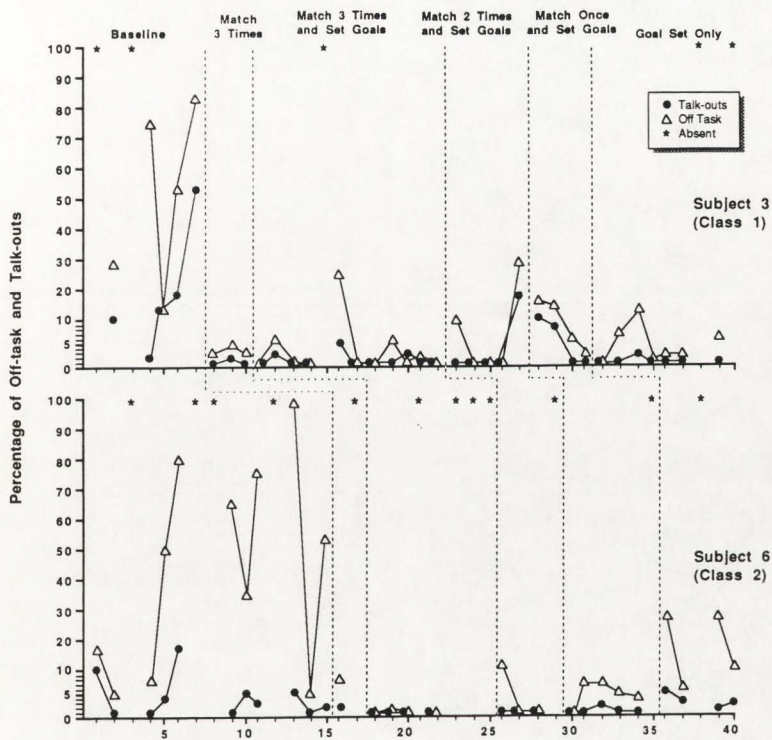


Figure 11. Percentage of intervals scored as off-task and talk-outs for Subjects 3 and 6 in their special education classes.

across all conditions. Table 2 presents the mean percentage and range of talk-outs for each subject during baseline and intervention phases. Baseline levels of talk-outs in the special education classes for all subjects were at or below 21%, and ranged from 2% to 21%.

Talk-outs by all subjects were essentially eliminated in the special education classrooms following the implementation of the matching procedure. They decreased from an average of 6.5% to .8%. The decrease was immediate and remained below, on the average, 2% for all subjects throughout the matching and goal-set only phases.

Off-task behavior in the regular classroom. Figures 12, 13, and 14 present the rate of occurrence of off-task behavior for all subjects in the regular classroom. Mean percentages of off-task behavior for each subject during baseline and treatment phases are shown in Table 2. Baseline levels of off-task behavior are higher for each subject, with one exception, in the regular education class than in the special education classes. Five out of eight subjects exhibited average baseline rates of off-task behavior in the regular class above 50%. Once the matching procedure was implemented in the regular classroom, these rates were reduced to, on the average, 5.6%, compared to 3.8% in the resource rooms.

When the matching requirement was removed in the regular class, and subjects were only required to set daily academic goals, an increase in off-task behavior was observed in all subjects except one. The increase averaged 6% and ranged from 1.9% to 15.6%.

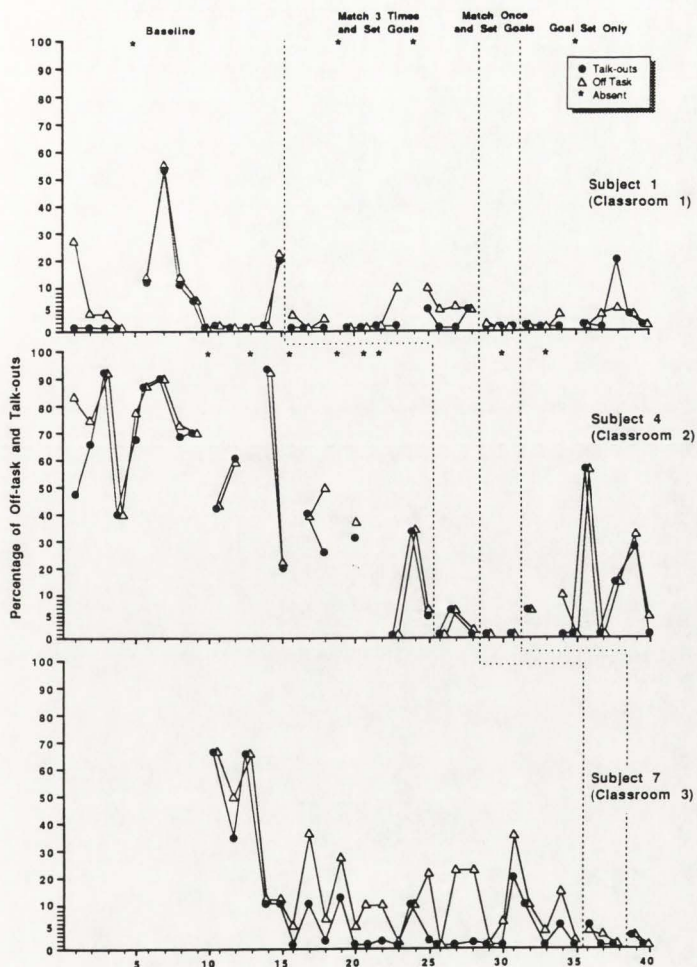


Figure 12. Percentage of intervals scored as off-task and talk-outs for Subjects 1, 4, and 7 in their regular education class.

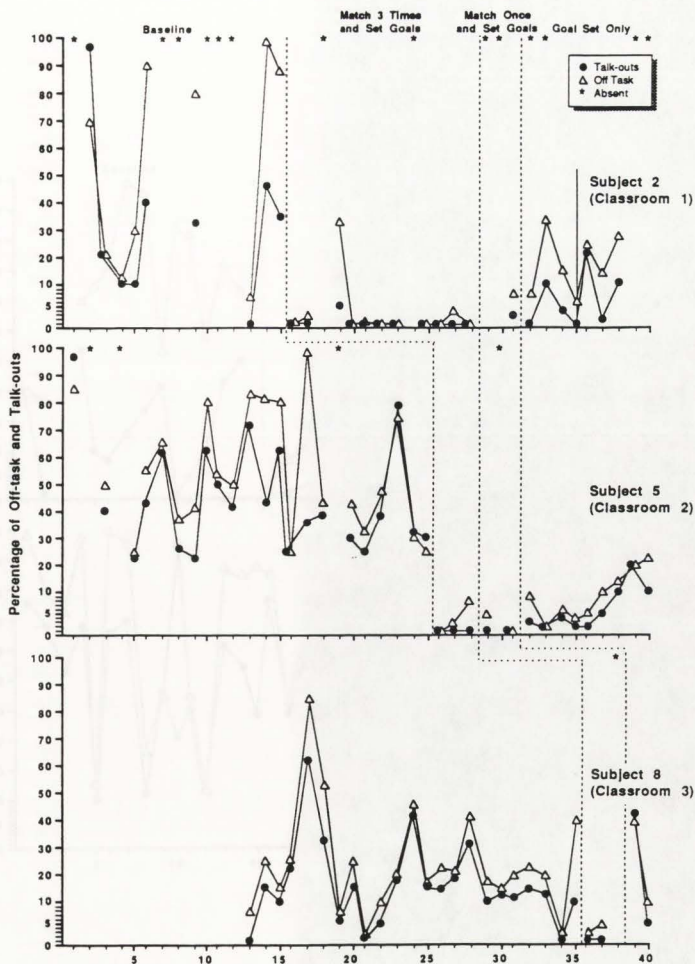


Figure 13. Percentage of intervals scored as off-task and talk-outs for Subjects 2, 5, and 8 in their regular education class.

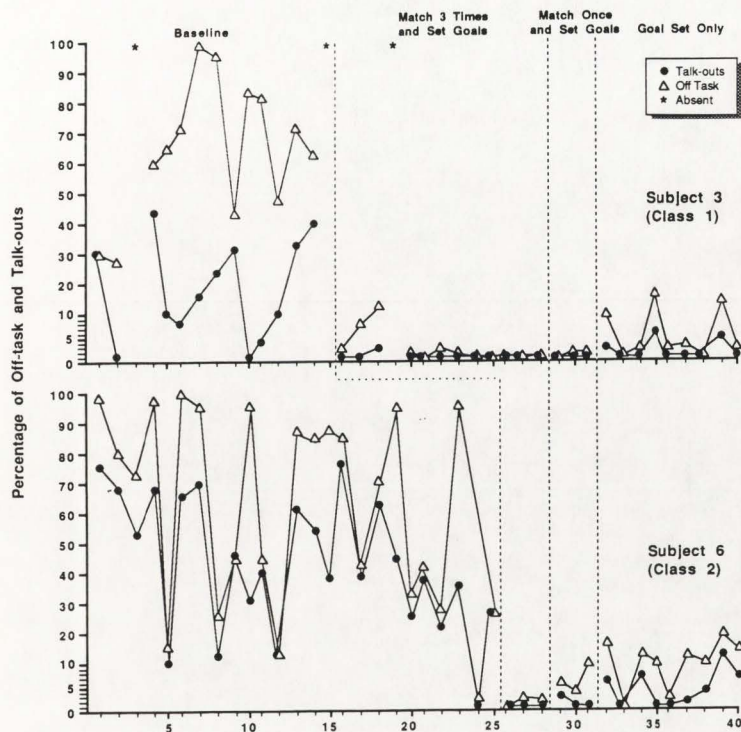


Figure 14. Percentage of intervals scored as off-task and talk-outs for Subjects 3 and 6 in their regular education class.

Talk-outs in the regular classroom. Figures 12, 13, and 14 show the percentage of talk-outs in the regular education classrooms. Table 2 is the mean percentage and range of occurrence of talk-outs for each subject during baseline and intervention phases. Talk-outs decreased from an average of 27% during baseline to 4.8% following the implementation of the matching procedure. Increases in the variability and the rate of talk-outs during the goal-setting phase were observed in five of the eight subjects. The increase averaged 5.6% and ranged from 1.5% to 15%.

Teacher reinforcement. Table 3 presents the average rates of teacher reinforcement across all conditions in both the special and regular education settings. Little or no change was observed in the rate of occurrence from baseline to treatment phases. Baseline rates in both settings ranged from 0 to 1%. The rate of teacher reinforcement for all treatment phases in both the special and regular education classrooms also ranged from 0 to 1%.

Academic Data

Percent complete and correct in the special education classes. Table 4 shows the average percent completed on each academic assignment, the average percent complete, and the percent correct during baseline and intervention phases for all subjects. Every subject increased the percent of each assignment completed, on the average, by 36.5% from baseline to intervention. An average increase of 31% on the percent correct of each assignment was demonstrated by subjects in the resource rooms.

Table 3

Average Rates of Teacher Reinforcement

Special Education

<u>Baseline</u>	<u>Match 3 times</u>	<u>Match 3 times and set academic goals</u>	<u>Match twice and set academic goals</u>	<u>Match once and set academic goals</u>	<u>Goal-set only</u>
.04 (0-1)	.64 (0-1)	.51 (0-.5)	.22 (0-1)	.14 (0-1)	.03 (0-1)

Regular Education

.01 (0-1)		.01 (0-1)		.03 (0-1)	.08 (0-1)
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Table 4

Special Education Academic Data

Mean Percent Completed of Each Assignment			
Subject	Baseline	Intervention	Gain Score
1	64.50 (50-100)	91.18 (85-100)	26.68
2	15.00 (0-30)	68.30 (45-85)	53.30
3	29.50 (0-50)	76.64 (50-80)	47.14
4	65.30 (50-75)	96.20 (80-100)	30.82
5	79.00 (30-95)	99.50 (90-100)	20.50
6	35.30 (0-50)	86.70 (75-100)	51.40
7	47.50 (0-70)	64.90 (55-100)	17.40
8	28.50 (0-50)	73.70 (50-100)	45.20

Mean Percent Correct of Each Assignment			
Subject	Baseline	Intervention	Gain Score
1	61.00 (50-80)	86.64 (75-100)	25.64
2	10.00 (0-40)	62.20 (50-80)	52.20
3	25.00 (10-50)	64.55 (50-95)	39.55
4	58.00 (45-80)	87.88 (75-100)	29.88
5	73.30 (50-80)	81.50 (60-100)	8.20
6	35.30 (0-60)	86.70 (75-100)	42.45
7	36.50 (0-50)	57.60 (0-70)	21.10
8	28.50 (0-55)	63.60 (45-80)	35.10

Percent complete and correct in the regular classroom. Table 5

presents the average percent completed on each academic assignment, the average percent correct, and gain scores for the percent completed and the percent correct on assignments during baseline and intervention phases across all subjects. Six of the subjects increased the average percent completed of each assignment. This increase averaged 26% and ranged from 6.45% to 43.60%. Two subjects showed an average decrease in the percent of each assignment completed. This decrease averaged 5.8%. Subject 5's decrease averaged 1.37%. Subject 8's decrease in percent completed from baseline to intervention phases averaged 10.38%. An increase in the mean percent correct of each assignment was observed in the regular class. On the average, subjects increased the percent correct of each assignment by 24.19%. A decrease in the mean percent correct was observed by one subject. The average percent correct on assignments decreased by .88% for Subject 8.

Table 5

Regular Education Academic Data

Subject	Mean Percent Completed of Each Assignment		
	Baseline	Intervention	Gain Score
1	82.80 (70-100)	89.25 (70-100)	6.45
2	33.00 (0-50)	76.25 (60-80)	43.25
3	53.20 (40-65)	96.80 (75-100)	43.60
4	55.14 (30-65)	82.00 (70-100)	26.86
5	89.37 (75-90)	88.00 (80-100)	-1.37
6	86.25 (75-100)	98.00 (85-100)	11.75
7	64.00 (40-80)	91.87 (80-100)	27.87
8	91.00 (85-100)	80.62 (75-100)	-10.38

Subject	Mean Percent Correct of Each Assignment		
	Baseline	Intervention	Gain Score
1	66.80 (50-85)	72.25 (65-100)	5.45
2	25.40 (0-50)	68.50 (50-80)	43.10
3	46.80 (30-60)	86.30 (75-100)	39.50
4	52.85 (40-70)	78.00 (60-95)	25.15
5	62.50 (55-80)	74.00 (55-90)	11.50
6	75.62 (60-80)	92.00 (75-100)	16.38
7	48.00 (20-50)	76.25 (65-80)	28.25
8	69.00 (50-75)	68.12 (30-85)	-.88

CHAPTER V

DISCUSSION

There has been a need for research documenting practical and effective strategies for use by mildly handicapped adolescents which would help facilitate the generalization of treatment gains made in the resource room back to the regular class. The present study addressed this need by investigating whether the self-evaluation/teaching matching procedures were effective in reducing talk-outs and off-task behaviors of subjects in the resource classroom. The effects of the self-evaluation/peer matching procedures in the regular classroom were also assessed. In addition, students were taught to set daily academic goals in both the special and regular classrooms in order to complete and turn assignments in on time.

Major Findings

Off-task behavior and talk-outs. The data presented in Figures 9 through 14 reveal that student behavior generally improved after self-evaluation procedures were taught in the resource room and that improved behavior generalized to the regular class once peers implemented the matching component of the self-management procedures. As a group, students' average rate of off-task behavior decreased 17% in the resource room and 35% in the regular class. Average rates of talk-outs for the group were reduced by 6% in the resource room and 24% in the regular class.

These improvements in observed classroom behavior are more dramatic if one looks specifically at those students whose rates of off-task and talk-outs were above 20% during baseline conditions. For example, Subject 3's rate of off-task behavior in the resource class was reduced by 35% (from 41% to 6%) following the implementation of the matching procedures. His talk-outs were reduced 20% (from 21% to .8%). Subject 6's average rate of off-task behavior in the resource room was reduced by 33% (from 37% to 4%).

Reductions in problem behaviors from baseline to intervention phases were even more dramatic in the regular classroom where initial rates were, on the average, higher than those observed in the resource class. For example, Subject 4's off-task behavior was reduced by 55% (from 57% to 2%). His talk-outs were reduced from 50% to 15%. Similarly high rates of off-task behavior and talk-outs were observed in Subject 5's data during baseline. These were reduced 50% and 49%, respectively, following the implementation of the self-management procedures in the regular class. In addition, teachers in both settings said that they felt students were under greater instructional control in the classroom and that the classroom atmosphere was more positive than before implementation of the procedures.

Academic goal setting. The frequency of reduced talk-outs and off-task behaviors was generally maintained during the goal-set-only condition in both special and regular classes. During this phase, points were no longer available for self-ratings of classroom behavior. However, points continued to be awarded for setting an appropriate daily academic

goal, achieving that goal, and completing entire assignments on time. With the exception of Subjects 4 and 8 in the regular classroom, the frequency of off-task behavior and talk-outs remained at or below 10% for all subjects during the goal-set-only phase. For Subject 4, both off-task behavior and talk-outs averaged 18% during the goal-set-only phase. While this was considerably lower than his average baseline levels for those behaviors (baseline averaged 57%, goal-set-only rates averaged 18%), the increase from matching to goal setting was greater by 8% than was observed by other subjects. On four out of six days during this condition, however, Subject 4's rates of off-task behavior and talk-outs were at or below 10%. On the other two days, he reported to the teacher that he "didn't want to earn any points today."

Generalization. Behavioral gains made in the resource room following the implementation of the self-management procedures did not generalize to the regular classroom until the peer-mediated matching procedure was introduced in that setting. High rates of off-task and talk-outs continued to be observed in the regular class even though mean rates of those behaviors had decreased to below 10% in the resource class. Mean rates of occurrence of these behaviors decreased to below 10% in the regular class once subjects began matching with peers in that setting. The lack of spontaneous generalization of behavioral gains to the regular class illustrates the notion described by Baer et al. (1981), which is that generalization is not a passive phenomenon that can be expected to occur on its own. Therefore, the generalization of self-management skills must be actively programmed. Once that occurred, with the

introduction of the peer-mediated strategy in the regular classroom, improved behavior was observed in that setting as well.

Academic gains. Equally as important as the observed decreases in off-task behavior and talk-outs are the gains in academic performance made by subjects in both the special and regular classrooms. An increase in the number of assignments completed was observed following the implementation of the self-management procedures across all subjects in the special education class, as was an increase in the overall percentage of those assignments that were correct. More specifically, the group, on the average, completed 26% more of each assignment and increased the average percent correct by 27% in the special education classroom. Similarly, the percent complete on assignments in the regular class increased on the average 20% while the percent correct increased 24%.

Several of the subjects who had lower than average rates of talk-outs and off-task behavior during baseline conditions in both special and regular education classrooms exhibited higher than average academic gains during the intervention phases of the study. Subject 2, for example, averaged 6% off-task behavior and 2% talk-outs in the special education classroom during baseline; rates which were well below group averages during this condition. However, his gain scores for the percentage completed and percentage correct on academic assignments in the special education classroom were the largest of any subject in the study. Similar results were observed with Subject 6. The frequency of his talk-outs in the special education class averaged only 5% during baseline. However, his academic gain scores for the percentage of assignments

completed and the percentage of assignments scored correct were 51.40 and 42.45, respectively. Both scores were well above the group average.

Relationship to Previous Research

In the present study, students were taught to use self-management procedures to reduce the occurrence of behavioral excesses such as talk-outs and other disruptive behaviors. Other studies that implemented self-management training with disruptive students initiated the intervention process by first establishing a token reinforcement system which was managed by the teacher or experimenter (Drabman et al., 1973; Rhode et al., 1983; Turkewitz et al., 1975). In contrast, the present study eliminated this step and involved the students in self-management training from the beginning. This approach, which was as successful in eliminating disruptive student behaviors as demonstrated in previous self-management investigations, has two specific advantages: (a) it eliminates one step in the teaching and fading process and (b) it makes the adolescent a part of the behavior change process from the very beginning of the intervention.

Additionally, previous studies which have investigated the self-evaluation/matching procedures have done so with elementary-age students in contrived settings (Drabman et al., 1973; Rhode et al., 1983; Turkewitz et al., 1975). The present study investigated the procedures with high school students in a public school resource room and a regular classroom. The results of the study demonstrated that the procedures could effectively reduce the off-task behavior and talk-outs of high school students in a public school setting.

Rhode et al. (1983) demonstrated generalization from a special education to a regular education setting using a regular classroom teacher in the intervention. However, the Rhode et al. study was conducted with elementary-age students. Smith et al. (in press) indicated that at least some secondary teachers do not have the time or inclination to assist in a student self-management program. The present study demonstrates that peers may be an effective alternative to the use of regular teachers in a program designed to transfer the use of self-management procedures from special education to regular education classrooms.

The present study also applied a self-management intervention in the form of academic goal-setting to academic deficits. Students were taught to identify and label all of the required tasks in both their special education and regular English class and then sequence the list of activities in the order in which they thought they should be completed. Next, students divided the activities to be completed into the available time and decided upon daily goals that must be accomplished in order to meet the deadline. This planning and scheduling skill is one that is commonly used by students in secondary schools who are academically successful (Deshler, Schumaker, Alley, Warner, & Clark, 1982). Researchers have reported the effects of these skills on the academic performance of learning disabled children and adolescents, but have not addressed how these skills may be taught within the context of a behavior management system that emphasizes self-management skills. In the present study, points continued to be awarded for setting an appropriate academic

goal, achieving that goal, and completing entire assignments on time. The decision to reward the students for only academic behavior had already been achieved, and it was expected that these could be maintained through academic contingencies alone. Although some increases in off-task behavior and talk-outs were observed in both settings during the goal-set-only phase, mean rates of occurrences for these behaviors generally remained well below baseline levels for all subjects. Observe increases in off-task behavior and talk-outs at the end of the goal-set-only phase may be attributed to the fact that data were collected during the last few weeks of school, when behavioral expectations are often relaxed by school personnel. If time had allowed, the matching procedure could have been reinstated until behavior was again occurring at more acceptable rates.

Implications for Practitioners

The self-evaluation and self-management procedures have wide application in the education of behaviorally disordered and learning disabled adolescents. First, the procedures may be implemented in the regular class by regular education teachers, as Rhode et al. (1983) have suggested, or by peers, as suggested in the present investigation. Second, the procedures used in this study provide not only a method of reducing excessive behaviors (e.g., talk-outs), but also a method for decreasing academic deficits. Finally, the self-evaluation/matching procedures may be used by teachers as an alternative to traditional token economies or other teacher-managed behavior management systems, thus

freeing the teacher for more direct instructional activities once initial training has occurred.

Implications for Further Research

The present study was implemented in January and concluded at the end of the school year in May. It would be beneficial if future research would examine the effects of initiating the treatment program at the beginning of the school year so that long-term assessments of behavioral gains could be conducted.

An additional area for research would be to examine the effects of serving as a peer mediator on peers' academic performance and classroom behavior. Anecdotal information gleaned from the present study suggests benefits to the regular education peer following participation.

In addition to examining the effects on peer behavior, future research might assess the cost effectiveness, in terms of training time, of requiring target students to rate each other's behavior in the mainstream class. This would eliminate the need to train additional students from the regular class.

Finally, characteristics of students such as age, sex, nature and durability of behavioral and academic difficulties, and previous exposure to behavior management treatments should be examined to determine for which students the program is most effective. More specifically, are there certain aspects of the program which would benefit different students? For example, is the behavior management component sufficient for some students, or must the academic component be taught as well in order to see an increase in academic performance? Are there some

students for whom the academic component alone may result in a decrease in off-task behavior and an increase in academic performance?

Replications of the present study with other populations of behaviorally disordered and learning disabled adolescents would provide useful information regarding the use of self-evaluation/matching procedures in public school settings.

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APPENDICES

Appendix A
Parental Consent Form

Dear Parent,

We have designed a program to teach high school students procedures that will help them control their own behaviors. Students will be taught to count the occurrence of those behaviors, set goals to decrease the problem behaviors (and/or improve positive behaviors), match their self-recordings with the recordings of peers, and receive reinforcement for improvements toward the goals that have been set.

_____ has been asked to assist the teachers of the program in teaching some of these skills to his classmates in his English class. This assistance will be in the form of providing feedback to the trainees regarding their behavior during academic work periods. Your student will receive extensive instruction on how to perform this task. In addition, he will be given the opportunity to exchange points he earns for items such as school supplies, magazines, and small food items.

We would appreciate your permission in allowing _____ to participate as a "peer mediator" in this program. We feel that it would be an excellent opportunity for him to develop positive leadership skills while at the same time greatly enhancing the learning opportunities for some of his classmates. If you have any questions now or at any time during the conduction of the program, please feel free to contact us at Sky View High School.

Sincerely,

Deborah Smith
English Teacher

Susanne Haws-Kuresa
Special Education Teacher/
Program Instructor

I give my permission for _____ to participate in
the above described program.

Signature

Date

Appendix B
Observation Coding Sheet

Teacher's Observations

Observation 1

1	Teacher	Student
2	Teacher	Student
3	Teacher	Student
4	Teacher	Student
5	Teacher	Student

6	Teacher	Student
7	Teacher	Student
8	Teacher	Student
9	Teacher	Student
10	Teacher	Student

11	Teacher	Student
12	Teacher	Student
13	Teacher	Student
14	Teacher	Student
15	Teacher	Student

16	Teacher	Student
17	Teacher	Student
18	Teacher	Student
19	Teacher	Student
20	Teacher	Student

21	Teacher	Student
22	Teacher	Student
23	Teacher	Student
24	Teacher	Student
25	Teacher	Student

Appendix C
Reinforcer Samples

ACTIVITY REINFORCERS AND PRIVILEGES

Omit an assignment
Extra points added on to an exam score
Free period (no work)
Computer games
Use tape player with headphones
Extra time between classes
Study with a friend

EDIBLE AND TANGIBLE REINFORCERS

Gum
Candy bars
Soda pop
Cupcakes
Fruit
Nuts
Juice
Magazines
Coupons
School supplies

VITA
Deborah J. Smith

Home Address:

452 North 500 East
Logan, Utah 84321
(801) 753-1962

Business Address:

Department of Special Education
Utah State University
Logan, Utah 84322-6500
(801) 750-3249

EDUCATION

Ph.D.	Utah State University Logan, UT	1988	Special Education
M.A.	California State University Los Angeles, CA	1983	Psychology
B.A.	University of California Santa Barbara, CA	1977	Experimental Psychology

Teaching Certification

Standard Elementary (State of California - Multiple Subjects)

Special Education (State of Utah - Behaviorally/Emotionally Handicapped
Endorsement)

RESEARCH ACTIVITIES

1987-present **Program Coordinator**
"Cooperative Program for Behaviorally Disordered
Adolescents," a one-year grant funded by the Utah State
Office of Education to the Department of Special
Education, Utah State University. Project objectives
include the establishment of two exemplary programs for
serving students with behavior disorders in the least
restrictive environment; one at a middle school and one at
a high school.

Responsibilities: The development of specific
classroom plans and treatment programs, monitoring the
continuous evaluation of the model demonstration program,
coordinating interagency services, contributing to the
development and implementation of a parent training
component, and developing a program guide for the
establishment of the continuum of services for
behaviorally disordered adolescents.

1984-1987

Project Coordinator

"Field-Initiated Research: Teaching Self-Control to Secondary-Aged Behaviorally Disordered and Learning Disabled Students," a three-year grant awarded to the Department of Special Education, Utah State University, by the U.S. Department of Education. Research investigated the effects of self-management training as a means to facilitate generalization of improved social and academic behaviors.

Responsibilities: The development of intervention strategies and training materials for classroom teachers, teacher training and supervision, the development of observation systems, training and on-site supervision of observers, teaching self-management skills to adolescents with behavior disorders and learning disabilities.

Project co-directors: K. Richard Young, Richard P. West, and Daniel P. Morgan.

1983-1984

Research Assistant

"A Cooperative School/Home Program for Teaching Social Skills to Mildly Handicapped Children and Youth," a one-year grant awarded to the Department of Special Education, Utah State University, by the U.S. Department of Education. Research investigated the effects of a cooperative school/home program on facilitating the generalization of social skills from school to home and other community settings.

Responsibilities: The development of observation systems, training and on-site supervision of observers, teacher and parent training, and the development of parent training materials.

Project co-directors: K. Richard Young and Richard P. West.

1980-1982

Research Assistant

"Preventing School Vandalism and Improving Discipline," a three-year grant awarded to the Department of Counselor Education, California State University, Los Angeles, by the L.A. County Superintendent of Schools. Research analyzed how vandalism costs and student disruption were related to the implementation of a behavioral training and consultation package.

Responsibilities: Teacher training and on-site supervision of observers.

Project director: G. Roy Mayer.

UNIVERSITY TEACHING EXPERIENCE

- Winter 1987 Instructor
 Summer 1987 Department of Special Education, Utah State University.
 Winter 1988 "Education of Emotionally Disturbed Children" - Methods
 and procedures for this population in regular and special
 classrooms and in institutions.
- 1984-1987 Teaching Assistant
 Department of Special Education, Utah State University.
 "Intervention Strategies for Academic and Social Behaviors
 of the Handicapped"
 Systematic procedures for development of appropriate
 academic and social behaviors, classroom management
 procedures, procedures for direct and continuous
 measurement of student performance.
 "Teaching Social Skills to Handicapped Children and Youth"
 Current research related to teaching social skills to
 handicapped students.
- 1983 Practicum Supervisor
 Department of Special Education, Utah State University.
 "Practicum: Mildly Handicapped"
 Supervised students in actual training settings,
 conducting assessments, program development, and
 teaching activities.
- 1980-1982 Teaching Assistant
 Department of Psychology, California State University, Los
 Angeles.
 Taught inferential statistics laboratory, supervised
 undergraduate students' research projects in the
 experimental learning laboratory, and assisted in the
 following courses by writing and grading exams:
 "Basic Principles and Analysis of Behavior,"
 "Learning, Motivation, and Emotion."

PUBLIC SCHOOL TEACHING EXPERIENCE

- 1985-1986 High school teacher
 Smithfield, Utah. Taught English to adolescents with
 behavior disorders and learning disabilities.
- 1983-1984 Project teacher
 Logan, Utah. Taught social skills to children with
 behavior disorders and learning disabilities.
- Summers
 1979-1981 Classroom demonstration teacher
 University Elementary School, University of California,

Los Angeles. Demonstrated classroom and instructional management skills to inservice teachers. Principal: Madeline Hunter.

1978-1980 Elementary school teacher
Blythe, California. Taught regular education first grade.

INSERVICE TEACHER TRAINING EXPERIENCE

1986-1988 Inservice teacher trainer
Department of Special Education, Utah State University.
Trained elementary and secondary special educators to teach self-management skills to children and adolescents with behavior disorders.

1985 Inservice teacher trainer
Norwalk/La Mirada School District, Norwalk, California.
Trained regular education teachers to teach social skills to "at-risk" students within the regular classroom.

1984 Inservice teacher trainer
Granite School District, Salt Lake City, Utah.
Trained special education teachers, school counselors, and other school personnel to teach social skills to handicapped children and youth.

PUBLICATIONS

Journals

- Nelson, J. R., Dodd, J. M., & Smith, D. J. (1988). An analysis of accommodations faculty are willing to make for learning disabled students in higher education. Manuscript submitted for publication.
- Smith, D. J., Nelson, J. R., & Young, K. R. (1988). Self-management: A promising procedure for serving behavior disordered children in rural settings. Manuscript submitted for publication.
- Smith, D. J., Young, K. R., West, R. P., Morgan, D. P., & Rhode, G. (in press). Reducing the disruptive behavior of junior high school students: A classroom self-management procedure. Behavioral Disorders.
- Young, K. R., Smith, D. J., West, R. P., & Morgan, D. P. (1987). A peer-mediated program for teaching self-management strategies to adolescents. Programming for Adolescents with Behavior Disorders, 3, 34-47.

Curriculum Materials

- Young, K. R., West, R. P., Morgan, D. P., & Smith, D. J. (1987). Teaching self-management to adolescents: Instructional manual. Logan, UT: Department of Special Education, Utah State University.

Reports

- Young, K. R., West, R. P., & Smith, D. J. (1984). A cooperative parent/school program for teaching social skills to handicapped children. Final report. U.S. Department of Education, Office of Special Education.

Professional Review

- Guest Reviewer - Journal of Special Education Technology

PROFESSIONAL PRESENTATIONS

- Smith, D. J. (1988, May). The effectiveness of peer mediators on the development of self-management skills by handicapped adolescents. Paper presented at the Fourteenth Annual Conference of the Association for Behavior Analysis, Philadelphia, PA.
- Nelson, J. R., & Smith, D. J. (1988, April). Behavior disorders: Do we know enough to proceed? Paper presented at the Council for Exceptional Children Conference, Billings, MT.
- Smith, D. J. (1988, March). Behavior management strategies for teachers of behavior disordered children and youth. Invited address presented at the Council for Exceptional Children Conference, Lander, WY.
- Young, K. R., West, R. P., Smith, D. J., Haws-Kuresa, S., & Bell, K. (1987, November). Putting it all together: A cooperative, comprehensive program serving behaviorally disordered adolescents. Paper presented at the Council for Children with Behavior Disorders Conference, Tempe, AZ.
- Smith, D. J. (1987, June). Using peer mediators to teach self-management skills to behaviorally disordered adolescents. Paper presented at the Tenth Annual Conference on Intervention Procedures for Exceptional Children, Utah State University, Logan, UT.
- Young, K. R., Smith, D. J., West, R. P., & Morgan, D. P. (1987, April). Who's in control? A self-management approach for educating behaviorally disordered and learning disabled students. Paper presented at the Council for Exceptional Children 65th Annual Convention, Chicago, IL.

- Young, K. R., West, R. P., Morgan, D. P., & Smith, D. J. (1986, October). Putting students in control: A self-management approach for educating behaviorally disordered children and adolescents. Paper presented at the Conference on Children and Adolescents in Conflict, New York, NY.
- Smith, D. J., Young, K. R., West, R. P., & Morgan, D. P. (1986, September). A peer-mediated program for teaching self-management to adolescents. Paper presented at the National Adolescent Conference, Minneapolis, MN.
- Smith, D. J., Haws-Kuresa, S., Young, K. R., Morgan, D. P., & West, R. P. (1986, June). Teaching self-management skills to high school students. Paper presented at the Ninth Annual Conference on Intervention Procedures for Exceptional Children, Utah State University, Logan, UT.
- Smith, D. J., Young, K. R., & West, R. P. (1984, May). A cooperative home and school program for teaching social skills to handicapped children. Paper presented at the Tenth Annual Conference of the Association for Behavior Analysis, Nashville, TN.

UNIVERSITY SERVICE

- 1987-1988 Faculty Search Committee, student representative,
Department of Special Education, Utah State University.
- 1986-1987 Doctoral Program Review Committee, student representative,
Department of Special Education, Utah State University.

PROFESSIONAL MEMBERSHIPS

- Association for Behavior Analysis
- Council for Exceptional Children